

In the Claims:

3. (Amended) A horizontally burning, high intensity discharge lamp having (a) a base, (b) a[n] light transparent outer envelope and (c) an arc tube operatively mounted therein, said base and said arc tube being rotationally fixed relative to each other and said base having means for predetermining the rotational orientation thereof when operatively mounted in a fixture,

said arc tube having a pair of spaced apart electrodes, an upper portion longitudinally conforming generally between said electrodes to the shape of the arc to be drawn therebetween and a [canoe shaped] canoe-shaped lower portion.

4. (Amended) The lamp of Claim 3 wherein said lower portion has a substantially planar flattened bottom.

5. (Amended) The lamp of Claim 4 wherein [the flattened bottom] said lower portion of said arc tube [is] has an upwardly concave end to end and side to side flattened bottom.

12. (Amended) A horizontal burning HID arc tube having a pair of spaced apart electrodes and canoe-shaped lower [bottom] portion.

17. (Amended) A horizontal burning double-ended HID arc tube having a pair of spaced apart electrodes, an upper portion longitudinally conforming generally between said electrodes to the shape of the arc to be drawn therebetween in the operation of the arc tube, and flattened bottom.

20. (Amended) A horizontal burning double-ended HID arc tube having a pair of spaced apart electrodes, said electrodes are tilted downwardly toward each other.

22. (Amended) The arc tube of Claim 20 wherein the sides [thereof] of said arc tube progressively narrow from the center [thereof] of said arc tube towards both ends [thereof] of said arc tube.

23. (Amended) A horizontal burning HID arc tube having a pair of spaced apart electrodes and a lower portion having a flattened bottom, the distance from said electrodes to said bottom being less than the distance from electrodes to the upper portion [thereof] of said arc tube.

26. (Amended) The arc tube of Claim 23 wherein [the junction of] the upper portion [and] joins said lower portion [is] below said electrodes.

27. (Amended) A horizontal burning HID arc tube having a pair of spaced apart electrodes, a circular cross-section upper portion and a lower portion with a flattened bottom, the distance from said electrodes to said [lower portion] flattened bottom being less than the distance from electrodes to the upper portion thereof.

29. (Amended) The arc tube of Claim 27 wherein [the junction of] said upper portion [and] joins said lower portion [is] below said electrodes.

30. (Amended) A horizontal burning HID arc tube having a pair of spaced apart coaxial electrodes, a circular cross-section upper portion and a lower portion having a flattened bottom, [the junction of] said upper portion [and] joins said lower portion [being] below the elevation of said electrodes.

32. (Amended) A horizontal burning HID arc tube having a pair of spaced apart coaxial electrodes, an upper portion longitudinally conforming generally between said electrodes to the shape of the arc to be drawn therebetween in the operation of the arc tube, and flattened bottom to thereby reduce the temperature differential in the arc tube walls.

33. (Amended) The arc tube of Claim 32 wherein the lowest elevation of said lower portion is [lowest] in the longitudinal center of the arc tube.

41. (Amended) An arc tube blank comprising an enlarged light emitting chamber intermediate tubular ends of the same diameter, said chamber having a lower portion with a flattened bottom.

46. (Amended) The method of Claim 41 wherein the bottom of said chamber is flattened in an area between about 20 and about 80 percent of the maximum length of said chamber.

47. (Amended) The arc tube of Claim 46 wherein the bottom of said chamber in the longitudinal center thereof is flattened over a distance between about 50 and about 60 percent of the length of said chamber.

50. (Amended) The [method] arc tube blank of Claim 41 wherein the height of said chamber is the greatest at the longitudinal center of said chamber and progressively more narrow towards the ends of said chamber.